

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 Claim 1 (currently amended): A method comprising:  
2 a) receiving, by a first node, a message for  
3 establishing a label-switched path;  
4 b) determining whether or not the message includes  
5 ~~extended information~~ resolution next hop information, the  
6 resolution next hop information including one of a host  
7 network address, or a network address prefix, of a second  
8 node which includes routing information to an egress node  
9 of the label-switched path;  
10 c) if the message does not include ~~extended~~  
11 ~~information~~ resolution next hop information, determining,  
12 using a first part of the message and routing information,  
13 whether or not to generate a further message to signal the  
14 label-switched path; and  
15 d) if the message does include ~~extended information~~  
16 resolution next hop information, determining, using the  
17 resolution next hop information ~~a second part of the~~  
18 ~~message~~ and routing information, whether or ~~[[nor]]~~ not to  
19 generate a further message to signal the label-switched  
20 path.

1 Claim 2 (original): The method of claim 1, wherein the  
2 message is a label-mapping message.

1 Claim 3 (original): The method of claim 1, wherein the  
2 message includes a FEC-label association.

1 Claim 4 (original): The method of claim 1, wherein the  
2 message includes a label distribution protocol  
3 label-mapping.

1 Claim 5 (original): The method of claim 1, wherein the  
2 routing information was determined using an interior  
3 gateway protocol.

Claims 6 and 7 (canceled)

1 Claim 8 (currently amended): The method of claim 1 ~~[[7]]~~,  
2 wherein the ~~method is performed by a first node~~ is in a  
3 first network domain, and  
4 wherein the ~~host address or prefix is of a second node~~  
5 is in the first network domain.

1 Claim 9 (original): The method of claim 8, wherein the  
2 second node is an autonomous system border router.

1 Claim 10 (original): The method of claim 8, wherein the  
2 first node runs an interior gateway protocol for generating  
3 routing information in the first node, and  
4 wherein the routing information includes an entry for  
5 the second node.

1 Claim 11 (original): The method of claim 1, wherein the  
2 first part of the message includes an address or prefix of  
3 a node.

1 Claim 12 (original): The method of claim 11, wherein the  
2 node is an ingress node of the label-switched path.

1 Claim 13 (currently amended): The method of claim 12,  
2 wherein the ~~method is performed by a~~ second node is in a  
3 first network domain, and  
4 wherein the ingress node is in a second network  
5 domain.

1 Claim 14 (currently amended): A machine-readable storage  
2 device storing a machine-readable message comprising:  
3 a) a first field including a label stored in  
4 association with a label-switched path;  
5 b) a second field including forwarding equivalency  
6 class information stored in association with the  
7 label-switched path; and  
8 c) a third field including ~~label-switched path~~  
9 signaling resolution next hop information stored in  
10 association with the label-switched path, the  
11 ~~label-switched path signaling resolution next hop~~  
12 information including one of a host network address, or  
13 [[and]] a [[host]] network address prefix of another node  
14 which includes routing information to an egress node of the  
15 label-switched path,  
16 wherein a forwarding device, receiving the  
17 message, processes the message to (1) determine whether or  
18 not the forwarding device has a routing table entry that  
19 matches at least one of (A) the forwarding equivalency  
20 class information included in the second field, and (B) the  
21 host network address or the [[host]] network address prefix  
22 included in the third field, and (2) use the label included  
23 in the first field for forwarding data only if the  
24 forwarding device determined that the forwarding device has  
25 a routing table entry that matches at least one of (A) the  
26 forwarding equivalency class information included in the

27 second field, and (B) the host network address or the  
28 [[host]] network address prefix included in the third  
29 field.

Claim 15 (canceled)

1 Claim 16 (currently amended): The machine-readable storage  
2 device of claim 14, wherein the forwarding equivalency  
3 class information includes an address or prefix of a second  
4 node in a remote network domain, and  
5 wherein the host network address or the [[host]]  
6 network address prefix included in the third field is of a  
7 first node which is in a local network domain, and  
8 wherein the data forwarding device is in the local  
9 network domain.

1 Claim 17 (original): The machine-readable storage device  
2 of claim 16, wherein the first node is an autonomous system  
3 border router.

Claim 18 (canceled)

1 Claim 19 (original): The machine-readable storage device  
2 of claim 14, wherein the message is a label mapping  
3 message.

Claims 20-23 (canceled)

1 Claim 24 (original): The machine-readable storage device  
2 of claim 14, wherein the message is a label distribution  
3 protocol label mapping message.

1 Claim 25 (currently amended): Elements comprising:  
2 a) one or more processors;  
3 b) at least one input device; and  
4 c) one or more storage devices storing  
5 processor-executable instructions which, when executed  
6 by one or more processors, perform a method of:  
7 i) receiving, by a first node, a message for  
8 establishing a label-switched path;  
9 ii) determining whether or not the message  
10 includes ~~extended information~~ resolution next hop  
11 information, the resolution next hop information  
12 including one of a host network address, or a network  
13 address prefix; of a second node which includes  
14 routing information to an egress node of the  
15 label-switched path;  
16 iii) determining, using a first part of the  
17 message and routing information, whether or not to  
18 generate a further message to signal the  
19 label-switched path if the message does not include  
20 ~~extended information~~ resolution next hop information;  
21 and  
22 iv) determining, using the resolution next hop  
23 information ~~a second part of the message~~ and routing  
24 information, whether or ~~[[nor]]~~ not to generate a  
25 further message to signal the label-switched path if  
26 the message does include ~~extended information~~  
27 resolution next hop information.

1 Claim 26 (original): The elements of claim 25, wherein the  
2 message is a label-mapping message.

1 Claim 27 (original): The elements of claim 25, wherein the  
2 message includes a FEC-label association.

1 Claim 28 (original): The elements of claim 25, wherein the  
2 message includes a label distribution protocol  
3 label-mapping.

1 Claim 29 (original): The elements of claim 25, wherein the  
2 routing information was determined using an interior  
3 gateway protocol.

Claims 30 and 31 (canceled)

1 Claim 32 (currently amended): The elements of claim 25  
2 [[31]], wherein the ~~elements are included in a first node~~  
3 is in a first network domain, and  
4 wherein the ~~host address or prefix is of a second node~~  
5 is in the first network domain.

1 Claim 33 (original): The elements of claim 32, wherein the  
2 second node is an autonomous system border router.

1 Claim 34 (original): The elements of claim 32, wherein the  
2 first node runs an interior gateway protocol for generating  
3 routing information in the first node, and  
4 wherein the routing information includes an entry for  
5 the second node.

1 Claim 35 (original): The elements of claim 25, wherein the  
2 first part of the message includes an address or prefix of  
3 a node.

1 Claim 36 (original): The elements of claim 35, wherein the  
2 node is an ingress node of the label-switched path.

1 Claim 37 (currently amended): The elements of claim 36,  
2 wherein the ~~elements are included in a~~ second node is in a  
3 first network domain, and  
4 wherein the ingress node is in a second network  
5 domain.

Claims 38 and 39 (canceled)

1 Claim 40 (previously presented): The method of claim 1,  
2 further comprising:  
3 d) generating, if it is determined to generate a  
4 further message to signal the label-switched path, a  
5 label mapping message.

1 Claim 41 (previously presented): The method of claim 1,  
2 further comprising:  
3 d) generating, if it is determined to generate a  
4 further message to signal the label-switched path, a  
5 label mapping message including an outgoing label; and  
6 e) creating a forwarding state binding between the  
7 outgoing label and a label in the message.

1 Claim 42 (previously presented): The elements of claim 25,  
2 wherein the method performed when the stored  
3 processor-executable instructions are executed by the one  
4 or more processors further includes:  
5 v) generating, if it is determined to generate a  
6 further message to signal the label-switched path, a  
7 label mapping message.

1 Claim 43 (previously presented): The elements of claim 25,  
2 wherein the method performed when the stored  
3 processor-executable instructions are executed by the one  
4 or more processors further includes:

5 v) generating, if it is determined to generate a  
6 further message to signal the label-switched path, a  
7 label mapping message including an outgoing label; and  
8 vi) creating a forwarding state binding between the  
9 outgoing label and a label in the message.

1 Claim 44 (currently amended): A method for use by a data  
2 forwarding device comprising:

3 a) receiving, by a first node, a first message for  
4 establishing a first label-switched path;

5 b) determining that the first message does not  
6 include ~~extended information~~ resolution next hop  
7 information;

8 c) finding a first label-switched route matching a  
9 first part of the first message;

10 d) determining that an interface of the first  
11 matching label-switched route found matches an interface on  
12 which the first message was received;

13 e) generating a first further message to signal the  
14 first label-switched path;

15 f) receiving a second message for establishing a  
16 second label-switched path;

17 g) determining that the second message includes  
18 ~~extended information~~ resolution next hop information, the  
19 resolution next hop information including one of a host  
20 network address, or a network address prefix, of a second  
21 node which includes routing information to an egress node  
22 of the label-switched path;



- 23           h) finding a second label-switched route using a  
24 ~~second part~~ the resolution next hop information of the  
25 second message;  
26           i) determining that an interface of the second  
27 matching label-switched route found matches an interface on  
28 which the second message was received; and  
29           j) generating a second further message to signal the  
30 second label-switched path.

1   Claim 45 (previously presented): The method of claim 1  
2   wherein the first part of the message includes a FEC-label  
3   association.

1   Claim 46 (previously presented): The method of claim 1  
2   wherein the first part of the message includes a label  
3   distribution protocol label-mapping.

Claim 47 (canceled)

1   Claim 48 (previously presented): The method of claim 1  
2   wherein the further message generated is a label mapping  
3   message.